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मानक

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IS 4641 (2005): Textiles - Fishing nets - Description and designation of knotted netting [TXD 18: Textile Materials for Marine-Fishing Purposes]



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भारतीय मानक

वस्त्रादि — मछली पकड़ने के जाल — गाँठदार जाल कपड़े
का विवरण और पदनाम
(दूसरा पुनरीक्षण)

Indian Standard

TEXTILES — FISHING NETS — DESCRIPTION AND
DESIGNATION OF KNOTTED NETTING
(*Second Revision*)

ICS 65.150

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NATIONAL FOREWORD

This Indian Standard (Second Revision) which is identical with ISO 1530 : 2003 'Fishing nets — Description and designation of knotted netting' issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendations of the Textile Materials for Marine/Fishing Purposes Sectional Committee and approval of the Textile Division Council.

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards which are to be substituted in their places, are listed below along with their degree of equivalence for the editions indicated. However, that International Standard cross-referred in this adopted ISO Standard, which has subsequently been revised, position in respect of that latest ISO Standard has been given:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 858 : 1973 Fishing nets — Designation of netting yarns in the tex system	IS 4640 : 1993 Fishing nets — Designation of netting yarns in the tex system	Identical
EN ISO 1107 : 2003 Fishing nets — Netting — Basic terms and definitions (ISO 1107 : 2003)	IS 4402 : 2005 Fishing nets — Netting — Basic terms and definitions	do

Indian Standard

TEXTILES — FISHING NETS — DESCRIPTION AND DESIGNATION OF KNOTTED NETTING

(Second Revision)

1 Scope

This European Standard specifies the principal characteristics of knotted netting for fishing nets, and specifies the items of information to be furnished when ordering the netting. It is intended to facilitate the exchange of information between purchasers and suppliers of knotted netting for fishing nets.

NOTE It should be understood that a complete designation of knotted netting and its component yarns will not always form part of a contract. There will be occasions when an order is placed on the basis of a sample or some other basis that does not give a complete indication of the properties of the netting or its component yarns. Nevertheless, it is desirable that the complete range of information should be dealt with in this standard so that a standardized method is available for use on those occasions when it is needed.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN ISO 1107:2003, *Fishing nets — Netting — Basic terms and definitions (ISO 1107:2003)*

ISO 858, *Fishing nets — Designation of netting yarns in the Tex system*

3 Principal characteristics of knotted netting

3.1 Manufacture

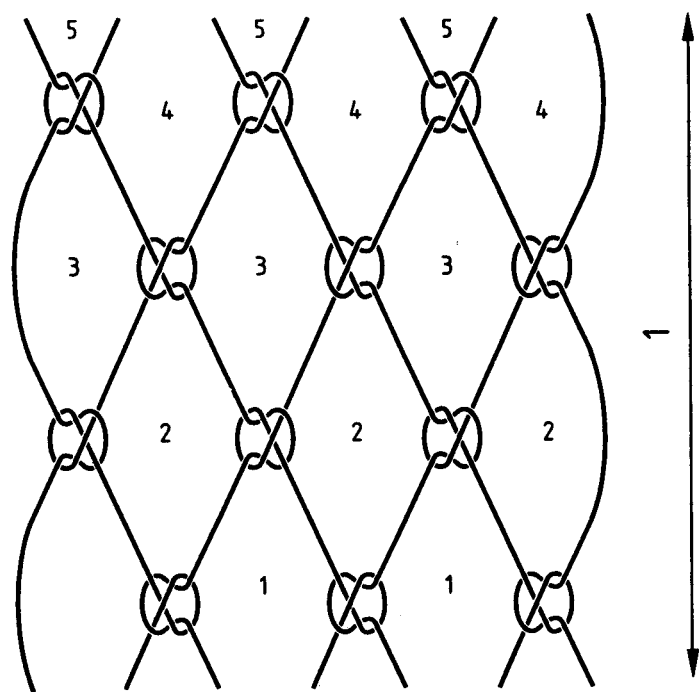
Knotted netting may be manufactured in the two-yarn system (see Figure 1) or in the single-yarn system (see Figure 2).

There are two types of machine made netting, either with all knots formed in the same direction of the sheet netting, called "twisted mesh" (see Figure 3) or with the knots alternately in the opposite direction called "untwisted mesh" (see Figure 4).

All types of knotted netting can be made with a single yarn or with multiple yarns.

3.2 Two-yarn system

Knotted netting consisting of two systems of yarns is mostly manufactured on a knotting machine. The yarn of one of the systems runs like a weaving warp from bobbins, while the yarn of the other system is wound on shuttles that guide it towards a hook-shaped or needle-type knotting device.



Key

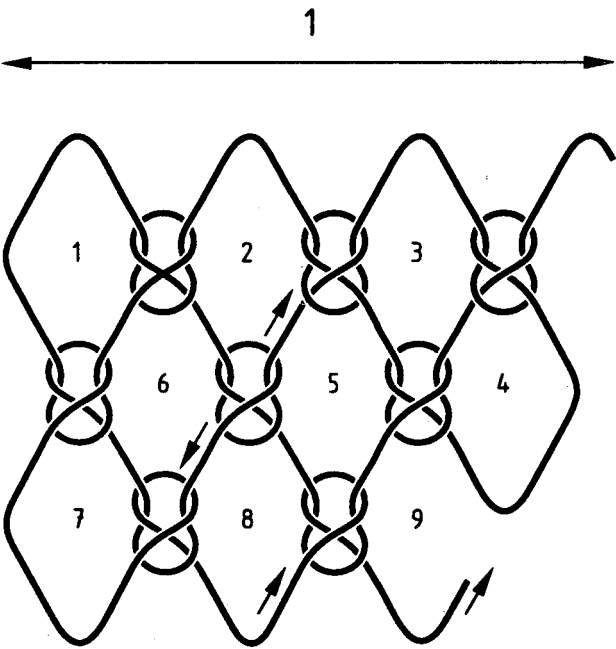
1 General course of the netting yarn

Figure 1 — Two-yarn system

Double or multiple yarns can be used in the two-yarn system.

3.3 Single-yarn system

Knotted netting consisting of a single-yarn system is mostly hand made. The yarn is wound on a netting needle and all the meshes in the same row are knotted individually one after another. A uniform mesh size may be achieved by the use of a mesh gauge during knotting. If the netting is made as a flat panel, then the netting yarn runs alternately from left to right and from right to left. If the netting is knotted round and round (as a “tube” or “cylinder”), then the yarn proceeds continuously in the same direction.



Key

1 General course of the netting yarn

Figure 2 — Single-yarn system

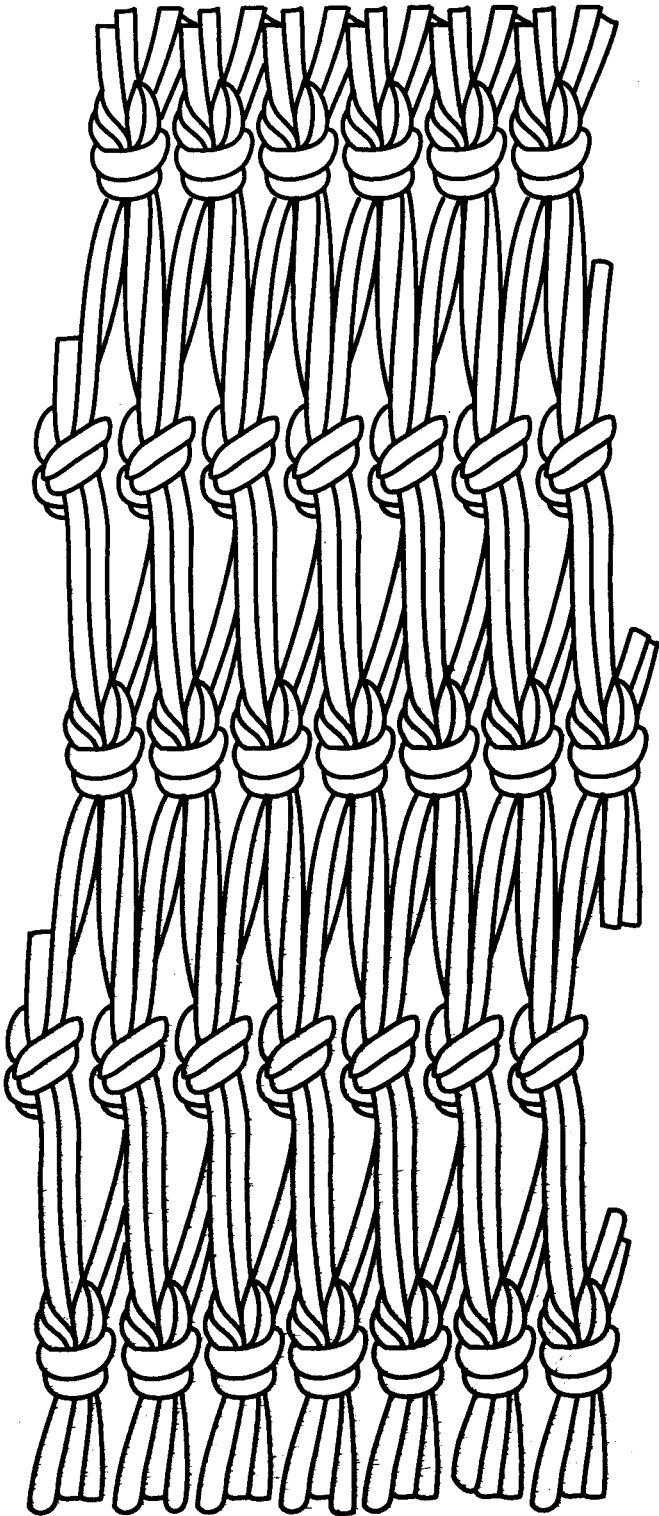


Figure 3 — Netting with twisted knots

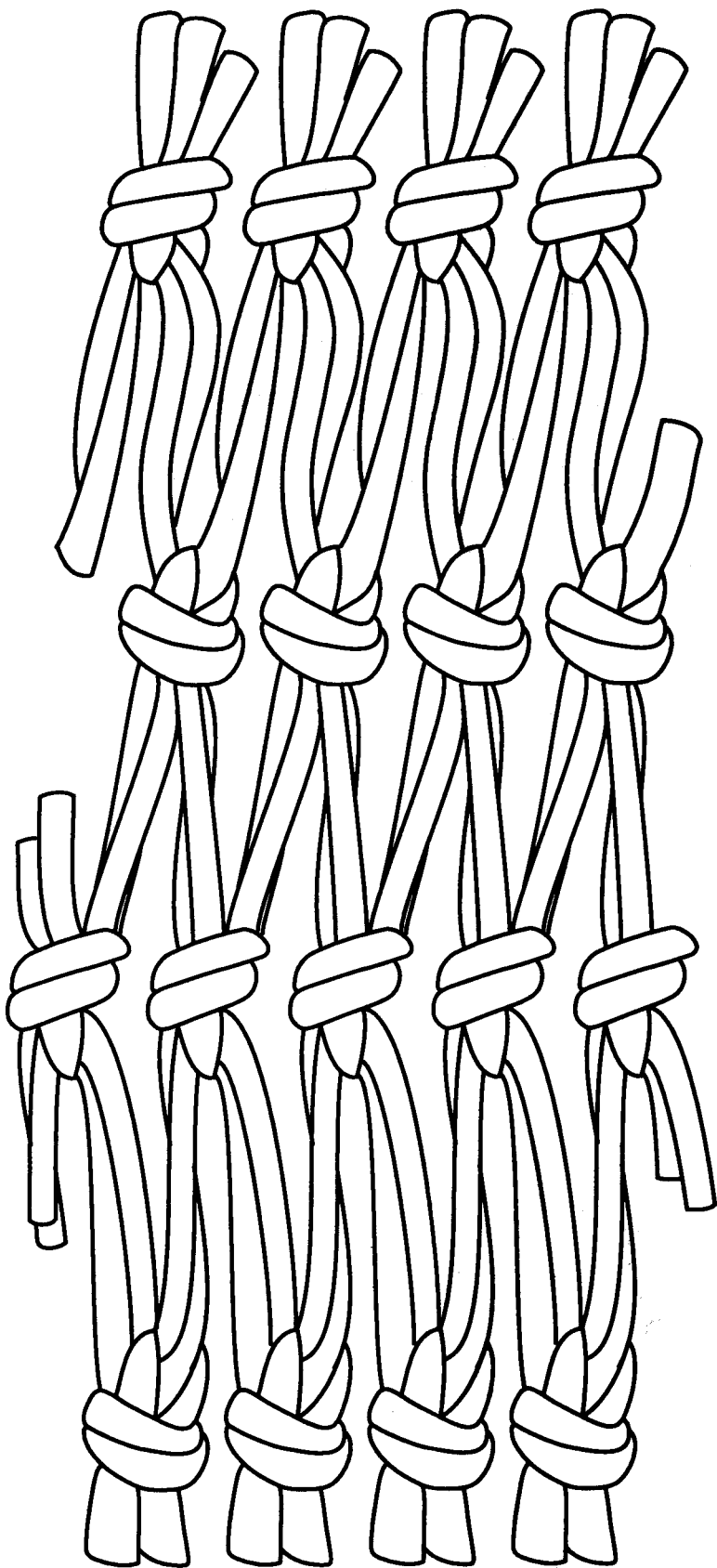


Figure 4 — Netting with untwisted mesh

3.4 Type of knot

Figures 5, 6, 7 and 8 show the principal types of knot with their customary designations.

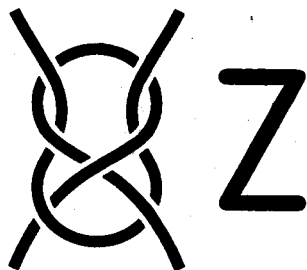


Figure 5 — Weaver's knot — Z-type



Figure 6 — Weaver's knot — S-type

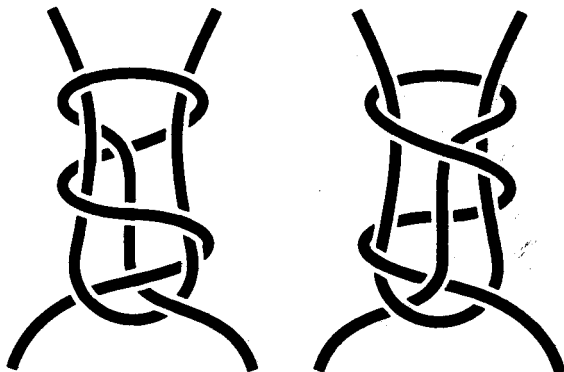


Figure 7 — Double weaver's knot

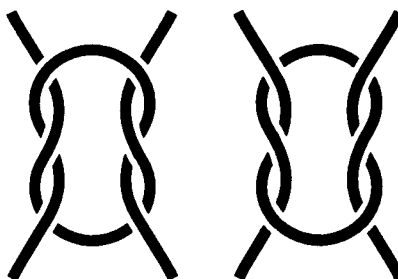


Figure 8 — Reef knot

3.5 Direction of stretch ¹⁾

The directions in which netting may be stretched are designated as follows:

- a) **N-stretch**, also called depthwise stretch.
- b) **T-stretch**, also called lengthwise stretch.

NOTE Netting may be stabilized after stretching, either by chemical or thermal means.

3.6 Size of netting and special features

3.6.1 The number of meshes counted in N-direction are designated as meshes deep or MD. The number of meshes in T-direction are designated as meshes long or ML.

3.6.2 The size of netting is defined:

- by the number of meshes in the T-direction (meshes long (ML)) and the number of meshes in the N-direction (meshes deep (MD)), joined by the multiplication sign x, or
- by the number of meshes in one direction and the length indicated in a recognized unit, for example metres, of the other direction, the netting being fully extended while the measurement is made.

3.6.3 The size of mesh is specified:

- a) as length of mesh side;
- b) as length of mesh; or
- c) as opening of mesh.

1) The term "stretch" in this context indicates *either* the operation of tightening of knots, *or* that of conferring a permanent shape by thermal or other means, *or* a combination of both processes. For the general definition of the symbols N and T for direction in netting see EN ISO 1107.

For mesh size definitions, see EN ISO 1107:2003, 3.4. Length of mesh multiplied by the number of meshes in same direction equals the measured length of netting.

3.6.4 Special features are sometimes required. These include edge or selvedge meshes for joining or mounting purposes, reinforcement and marking.

4 Description of netting yarns

4.1 Size

The designation shall follow the requirements specified in ISO 858.

4.2 Material

The type of fibre shall be stated. Descriptions of man-made fibre yarns shall indicate whether the yarn is composed, for example, of staple fibres; one or more filaments; textured or bulked yarn or film.

5 Information to be exchanged

5.1 Indication of use

In order to assist the netting manufacturer to offer the most suitable type of netting for a particular type of fishing net, the ultimate use of the netting shall be made known, for example, for gill-nets, trawl-nets, purse seine nets etc.

5.2 Manufacture

The purchaser shall state which type of netting (see 3.1) is required.

5.3 Type of knot

If the purchaser has a preference for a particular type of knot (see 3.2), he shall state this in his enquiry or order.

5.4 Direction of stretch

The purchaser shall state the direction of stretch required (see 3.3) and whether or not the netting is to be stabilized after stretching.

5.5 Size of netting

The purchaser shall specify the relevant details in accordance with 3.6, noting that for size of mesh (see 3.6.3) it is necessary to choose between length of mesh (to be preferred), length of mesh side or opening of mesh, for example "length of mesh 50 mm".

5.6 Netting yarns

If the purchaser requires specific yarns to be used, he shall give details in accordance with clause 4. Failing this, the netting manufacturer may use his discretion but any particulars given relating to the yarns used shall be in accordance with clause 4. Furthermore, the purchaser shall specify if any special treatment (for example, resin bonding) of the netting yarn is required.

5.7 Finish of netting

The purchaser shall specify what finishing process (if any) is required. The following are examples of possible processes :

- a) White (natural), untreated;
- b) White (natural), impregnated;
- c) Dyed, without impregnation of other treatment;
- d) Dyed and impregnated.

5.8 Packing of netting

The purchaser shall advise the supplier on the following:

- a) Whether netting should be extended in the N-direction (MD) or in the T-direction (ML) before packing, if this direction is other than the direction of stretch;
- b) The method of making-up, for example, lapped or rolled;
- c) The type of packaging required.

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Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Catalogue' and 'Standards : Monthly Additions'.

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Amendments Issued Since Publication		
Amend No.	Date of Issue	Text Affected

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